REPORT ON THE PHASE I, STEP 2 ARCHAEOLOGICAL SURVEY OF THE HODGES VILLAGE LOW FLOW AUGMENTATION PROJECT IN OXFORD, MASSACHUSETTS

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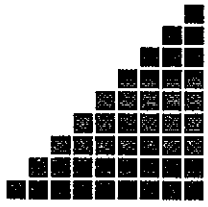

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Abstract

A Phase I, Step 2 (Intensive) archaeological survey of the proposed Hodges Village Low Flow Augmentation Project in Oxford, Massachusetts was conducted by the Office of Public Archaeology at Boston University for the Department of the Army Corps of Engineers, New England Division. The intensive survey consisted of background research, field reconnaissance, and subsurface testing.

Background research identified no prehistoric sites in the vicinity of the project area. One post-1938 residential site was identified within the impact area. Surface reconnaissance and subsurface testing produced a thin scatter of historical artifacts. No evidence of prehistoric activity was encountered.

It is concluded that no significant cultural resources will be impacted by the present project. No further archaeological work is recommended.

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The Project Archaeologist wishes to express his gratitude to several individuals who contributed to the archaeological survey of the Hodges Village Low Flow Augmentation Project. Mr. John Wilson and Dr. Gary Sanford provided information relating to the nature of the proposed project and to the ecology of the impact area. Field testing was conducted with the assistance of Keith Adams, Erika Albert, Patricia Crawford, Judith Dolan, Deborah Durham, and John Shea. Dr. Ricardo J. Elia offered welcome professional advice and edited the report.

INTRODUCTION

A Phase I, Step 2 (Intensive) archaeological survey of land scheduled to be inundated by the Hodges Village Low Flow Augmentation Project in Oxford, Massachusetts was conducted by the Office of Public Archaeology (OPA) at Boston University. The project is being directed by the U.S. Army Corps of Engineers, New England Division. The archaeological survey was conducted in accordance with environmental and preservation legislation in order to evaluate the potential impact of the project on cultural resources within the project area.

Fieldwork for the archaeological survey was conducted in August, 1983. J. Cooper Wamsley served as Project Archaeologist, conducted prehistoric and historical research, supervised the fieldwork, and wrote the report. Dr. Ricardo J. Elia supervised the overall project and edited the report.

Project Area: Construction Impact

In 1959 the U.S. Army Corps of Engineers constructed the Hodges Village Dam in Oxford, Massachusetts, as part of a project designed to control flooding of the Thames River Basin. As part of that project, a 2,050 feet long dam and four earth dikes were built in order to allow for the inundation of land adjacent to the French River, north of Hodges Village (Fig. 1).

The Hodges Village Low Flow Augmentation Project, currently under study, will involve the creation of a seasonal reservoir that would cover a minimum of 90 acres at an elevation of 472.0 feet, and a maximum of 200 acres at an elevation of 475.6 feet. The purpose of this project is to improve the water quality of the area by decreasing the level of organic material in the river. Implementation of the project will

require the clearing of approximately 160 acres in the reservoir, along with the removal of organic soils in some places (Department of the Army 1980: 8). The impact area for the archaeological survey is effectively all areas within the reservoir below an elevation of 476.0 feet.

Project Area: Physical Environment

The town of Oxford is located in the south-central part of Worcester County, approximately 11 miles south of Worcester and 50 miles west-southwest of Boston. The topography of the town is characterized by north-south trending hills to the east and west, geographically separated by a series of plains in the central part of town. Low areas containing small water courses, ponds, wetlands, and meadows are interspersed between these features. Elevations range from approximately 450-850 feet.

The dominant drainage system of the town is associated with the French (Maanexit) River, which flows north-south and parallels the town's main street, located about one mile east of the river. The largest tributary of the French River in Oxford is Little River, located west of Oxford Center, which flows in a southeasterly direction. Mill Brook, another large tributary, flows from the northeast part of town to the southwest, where it joins the French River. The French River flows into the Quinebaug River, which joins the Thames River at Norwich, Connecticut. The Hodges Village Low Flow Augmentation Project involves the impoundment of water north of Hodges Village, located along the French River northwest of Oxford Center.

The bedrock geology of the area is characterized by metamorphic and igneous rock formations, with phyllite and schists predominating. Granite also occurs in abundance along with some gneiss, quartzite, and amphibolite (Cameron

1976: 352-363; Crane 1924: 4; Department of the Army 1980: 5; Emerson 1917: 68, 228; Perry and Emerson 1903: 4, 136, 155).

Pleistocene glaciation sculpted the terrain of this area and left soils composed mainly of ice-contact stratified drift and alluvium. Soils are generally of moderate agricultural utility. Hilly areas have been traditionally productive for fruit growing, grazing, and for hay. The alluvial plains of Oxford constitute the most fertile areas in the region, and have been used for growing garden vegetables, grapes, strawberries, and other small fruits (Daniels 1892: 3). The glacial alluvium and drift have supported several gravelling operations within the vicinity of the project area in recent times (Department of the Army 1980: 5).

Oxford has an average annual precipitation of 42 inches per year. Temperatures range from an average of 70 degrees F in July and August to 24 degrees F in January and February (Ibid.: 4-5).

One of the most attractive aspects of the area for early historical settlement was the proliferation of hay-yielding meadows. Many of these have since become forested or plowed farmland, although traces of these meadows still exist in the area (Daniels 1892: 2).

Two large cedar swamps located within the original boundaries of Oxford were also of economic importance during the Historical Period. Fencing material, clapboards, and shingles were derived from these areas (Ibid.: 3). One of these swamps, Little Cedar Swamp, is adjacent to the northeast edge of the project area (Fig. 10).

A detailed description of the physical environment of the impact area of the project will be presented in the Field Reconnaissance section of this report.

BACKGROUND RESEARCH

Prehistoric Period

Little is known about the prehistoric occupation and utilization of the Oxford area. No prehistoric sites have been systematically excavated within the town, and, although a number of sites have been recorded in the area, most are lacking cultural and chronological data. Collecting has apparently been minimal, and no prehistoric collections are available for examination at the present time. The town library once had a collection of prehistoric artifacts from the area, but the collection was stolen five years ago and has not been recovered. In view of this lack of systematically obtained data for the prehistory of the town, archaeological expectations for the project area can be formulated on the basis of information derived from other areas in the region, and from the limited information available for Oxford.

Compared with surrounding towns, relatively few prehistoric sites are known in Oxford. Within a 7.5 mile radius of the project area, 39 prehistoric sites are recorded in the site files of the Massachusetts Historical Commission. Of these 39 sites, only 3 are recorded within the town of Oxford. Two other sites are reported in the town by David Anthony (1978: 54). This relatively small number of reported sites probably reflects the paucity of collecting and reporting in the area rather than actual prehistoric site densities.

There is no reason to believe that Oxford, with its ponds, streams, wetlands, plains, and upland areas, would have been less attractive to prehistoric settlement than surrounding areas. The French River Basin would have supported numerous floral and faunal resources, including anadromous fish, migra-

tory waterfowl, and other mammalian, amphibian, reptilian, and floral species, as it still does today (Dr. Gary Sanford: personal communication). Oxford's fertile plains could have been easily cultivated by Indians of the Woodland Period.

Prehistoric site locations in Oxford and the surrounding area reflect the locational characteristics of sites in Worcester County generally, as reported by Anthony (1978: 43-46). Four of the five known sites in Oxford are located on or within 100 feet of ponds. A total of 63% of sites recorded within a 7.5 mile radius of the project area are located on or near pond shores, indicating a probable preference for settlement along these bodies of water (cf. Anthony 1978: 45). Other sites in the area were located along streams, adjacent to wetlands, and on hill slopes (MHC Files).

There is little evidence for the prehistory of the Thames River drainage in Massachusetts. Sites with known cultural affiliations are rare due to the generally haphazard nature of the available data. The earliest evidence of prehistoric occupation comes not from the Thames River drainage, but from the Mill River site in Mendon, located about 15 miles east of Oxford. Here, a fluted point, characteristic of the Paleo Indian Period (c. 12,000-10,000 B.P.) was found in an Early Archaic (c. 10,000-8,000 B.P.) context. This site, which also contains evidence for Middle Archaic occupation, provides the best information available at the present time for the earliest human occupation of the area (Thomson 1978: 3-4).

The Late Archaic Period (c. 6,000-3,000 B.P.) in the area is characterized by a quantitative increase in sites and site habitats over previous periods. Sites recently excavated by the Public Archaeology Laboratory in nearby Sutton and Uxbridge date to this period (Thorbahn and Cox 1983). Evidence from these sites, including the Cracker, Purgatory I, and Purgatory II

sites, suggests that portions of the inland territories were being utilized on an occasional or seasonal basis, rather than being permanently occupied (Ibid.: 122).

Other recorded Late Archaic sites in the vicinity of the project area include 19-WR-111, 19-MM-148, and 19-MM-149 in Millbury. Sites of this period within Oxford include 19-WR-57, at Slaters Pond, located about 2.5 miles east of the project area, as well as sites on Fort Hill, about 2.5 miles southeast of Hodges Village (Anthony 1978: 54, Appendix B). A number of Late Archaic artifacts are shown in a photograph of the collection that was recently stolen from the town library (Daniels 1892: 42).

Woodland Period (c. 3,000 B.P.-1630 A.D.) sites in the area frequently occur at locations occupied by Late Archaic peoples, for example at the Slaters Pond site and the sites on Fort Hill (Anthony 1978: 54, Appendix B). Aboriginal ceramics, a hallmark of the Woodland Period, have been found at a site in nearby Millbury (19-WR-85).

No recorded prehistoric sites exist within the project area. The closest reported site is near Buffum Pond (19-WR-76), about one mile west of the project area. No cultural or chronological information is known for this site. Although the project area has included a pond throughout the historical period (e.g., Fig. 4), this pond was an artificial creation and was therefore not present during the prehistoric period. The French River would have flowed freely through the area, although changes in its course appear to be documented by deep post-glacial alluvial deposition that was identified in subsurface testing. When the water table permitted, this alluvium was removed in order to locate deeply buried sites. Many Early and Middle Archaic sites are thought to exist below these types of deposition (Dincauze and Mulholland 1977: 454).

The cedar swamp near the project area (Fig.10) existed at the time of contact (Daniels 1892: 3), and would have provided numerous wetland resources, including migratory waterfowl and amphibians. The resources associated with the wetlands along the French River would have made this area an attractive locale for exploitation during most of the prehistoric period.

Contact Period

At the time of contact, the area of Oxford belonged to the Nipmuck Indians, a group of loosely related, village-based bands, each with its own sachem. Each band paid tribute to more powerful neighbors for protection against hostile tribes (DeForest 1964: 57; Salisbury 1974: 36-37; Salwen 1978: 174). The Nipmucks inhabited central Massachusetts and northeastern Connecticut (Ayres 1940: 172; Connole 1976: 14; Cook 1976: 53; Daniels 1880: 17; Sylvester 1910: 451). A Praying Indian village was located about five miles east of the project area at Manchaug, and another was located about five miles south at Chaubunagungamaug (Gookin 1792: 189-190). Daniel Bondet, the first Huguenot minister in Oxford, was a missionary to the local Nipmucks under the authority of the Society for the Propagation of the Gospel in New England (Daniels 1880: 76; 1892: 22; Holmes 1826: 364). Praying Indian villages were created to "civilize the savages," thus reducing the threat of Indian uprisings and paving the way for colonial expansion (Jennings 1971: 197-212; Salisbury 1974: 28).

A Contact Period burial ground is located on the Northside Turnpike in Charlton (19-WR-248). Another site, probably dating to the Contact Period, is located on Lowes Pond, about 1.5 miles southeast of the project area (Anthony 1978: 54).

Historical Period

A broad range of primary and secondary documentary sources was consulted during the background historical research for this project. Primary sources, reposited in the Massachusetts State Archives and the Oxford Public Library, included county atlases, town maps, and several documents relating to the early history of the town. Secondary sources included the architectural and National Register of Historic Places files at the Massachusetts Historical Commission in Boston. Town and county histories comprised the remainder of the secondary sources examined.

Oxford was settled in 1686 by a group of approximately 30 Huguenot families under the direction of Gabriel Bernon, a wealthy Huguenot merchant from La Rochelle, France. Bernon had purchased the land in the Nipmuck country from Robert Thompson, Joseph Dudley, and William Stoughton, who had obtained a grant for the town in 1683. The Huguenot colony thrived during the first eight years of settlement; in that period, a grist mill, sawmill, church, houses, and stone fort were built. The young colony was threatened in 1694 by a group of hostile Indians, who forced the colonists to retreat to their fort on Fort Hill for a period of three months while their crop went unattended.

In 1696 an Englishman named John Johnson and his three children were massacred by a band of Albany Indians. Johnson's Huguenot wife escaped unharmed to Woodstock with the help of Daniel Johonnot, her cousin. The remainder of the Huguenot group abandoned the settlement and fled to Boston. By 1699, eight to ten Huguenot families attempted to reestablish the community, and set up a wash-leather mill (a mill with a large, water-driven, hammer-like apparatus used to tenderize leather) by 1703. Finally, in 1704, these French Calvinists were once again forced by the Indians to abandon Oxford; this

time they never returned (Ammidown 1877: 106-171; Crane 1924: 53-56; Daniels 1880; 1892: 5-31).

Oxford was not permanently settled until 1713, when about thirty English colonists received home lots on or near the fertile "Great Plain" near the middle of the present town. Each landholder was given an equal portion of land from Oxford's meadows and cedar swamps (Daniels 1892: 36-37).

The Indians did not pose much of a threat to the new English settlement, "although at times they prowled about the borders of the village, stealing pigs, chickens, garden vegetables, etc." (Daniels 1892: 42). According to tradition, there were two garrison houses in the town, although no documents exist to support this assertion (Ibid.).

During its first century of settlement, Oxford's population grew steadily as the local economy was dominated by agricultural pursuits. As the 18th century progressed, new homesteads took advantage of fertile areas other than those on the Great Plain, and settlement became less nucleated. Oxford's hills were good for grazing and fruit growing, while vegetable and small fruits were grown on its plains (Daniels 1892: 3). Population grew from 890 persons in 1764 to 1,112 in 1776. By 1790 the population dropped to 1,000, but rebounded to 1,273 in 1800.

The first grist mill operated by the English colonists was that of Daniel Eliott. By the time Eliott sold the mill located along Mill Brook in 1720, a sawmill had been added to the site. Milling on this privilege probably continued through 1792 (Ibid.: 189).

Prior to 1800, the most important exported manufacture of the town was potash. Six potash factories existed in Oxford during the 18th century (Ibid.: 188; 1794 Map).

Around the turn of the 19th century, Oxford's economy became increasingly diversified. Around 1793 a trip-hammer

forge was established on Bugs Pond Brook for the production of scythes. This operation was defunct by 1831 (Daniels 1892: 190; 1794 and 1831 Maps). Nails were being wrought by 1792 near Saccarappa Pond. From 1798 to 1805, bar iron was manufactured in South Oxford, now East Village in Webster. Around 1810 a distillery was operating near Carbuncle Pond, but this industry lasted only three years. Another important 19th-century industry was brickmaking. This industry was well established by the turn of the century, although its 18th-century origins are uncertain. Chaises and harnesses were also being manufactured at the south end of the Great Plain by 1828 (Daniels 1892: 188-215). Oxford also had a strong 19th-century shoe industry (Ibid.: 216-219; Crane 1924: 101).

The most significant business venture in the history of the town was the construction of a series of mills in South Oxford under the supervision of Samuel Slater. "No event in the history of the town, viewed from a business standpoint, was so far-reaching and important in its results as that of the beginning of manufacturing at South Oxford by Mr. Slater" (Daniels 1892: 190). Slater eventually purchased all of South Oxford and controlled major privileges along Mill Brook. In 1812 he constructed Green Mill here and began spinning wool; power weaving was introduced here in 1824. Slater's mill complex in South Oxford helped to mobilize public efforts to create the town of Webster in 1832 from part of Oxford (Ibid.: 190, 198).

North Oxford, Larned Village, and Hodges Village were thriving 19th-century mill villages that grew out of 18th-century milling activities. Milling began at Buffumville, another large village, by 1812 (Ibid.: 202). The project area is located north of Hodges Village, and includes the water seat from which its mills operated. For this reason, the

historical development of Hodges Village will be treated separately below.

Population in the 19th-century town of Oxford reflected changes in political boundaries as well as growth and decline of local industry. From 1800 to 1830 Oxford's population steadily increased from 1,273 to 2,034, reflecting early mill development in villages such as South Oxford. The creation of Webster out of South Oxford explains the population drop to 1,742 in 1840. From 1840 to 1860 the population grew to 3,034 and then fell to 2,669 in 1870. Another peak was reached in 1875 at 2,938, followed by a decrease to 2,355 in 1885. This change was due to a depression that struck Oxford's shoe industry. By 1890, population was again on the rise in the town (Daniels 1892: 269; Hurd 1889: 1317).

During the 20th century, industries declined and shut down, as Oxford remained a largely rural community. Much of the town today is wooded or under cultivation. As of 1980, the only manufacturing concerns were two woolen mills. Gravel pits provide some income, and the town is now constructing an industrial park to encourage new industry. In 1975 Oxford's population was 10,822, an increase of 17% from 1960 (Department of the Army 1980: 7). Population will probably continue to grow as Oxford becomes a bedroom community for nearby Worcester.

The birthplace of Clara Barton and the Hudson House are the only structures in Oxford listed on the National Register of Historic Places. The Clara Barton homestead is located at the northwest corner of Clara Barton Road and Ennis Road. The Hudson House, a farmhouse built in 1720, is situated on Hudson Road next to Hudson Pond. Oxford also claims to have the oldest Universalist Church in the country, located on Main Street (MHC Files).

Historical Development of Project Area and Vicinity

Hodges Village, located immediately south of the project area, has a long history of milling activity. In 1722, this site was sold by Abraham Skinner, an original proprietor, to Thomas Gleason, who built a grist and saw mill here by 1732. By 1794, the site was still occupied by a grist and saw mill (Fig. 2). Power weaving began here by 1822, but, by 1824 the mills were bought by Samuel Slater, who moved them to South Oxford. By 1825, a company led by Delano Pierce, Richard Olney, Stearns Witt, and Samuel Dowse bought the mill site, and constructed a new dam and mill building for the manufacture of woolen material. A minor change of ownership occurred in 1826, when the Oxford Woolen Manufacturing Company was organized and began operation. This company continued to produce wool flannel until 1846, when the entire mill complex was sold to George Hodges, Jr., who owned and operated it until his death in 1881. Andrew Howarth took over operations in 1882 and continued producing wool flannel here through 1920 (Crane 1924: 95).

Mill power at Hodges Village was derived directly from the French River. The first pond appeared in Hodges Village by 1794, but the mill power seat for this village was located upstream from the early pond (Figs. 2, 3). This pond apparently never functioned as a power source. By 1870, an impoundment in the project area appears above the power seat (Fig. 4). The same area remained flooded through 1938 (Fig. 5), but at present, the total area flooded on a yearly basis is much smaller (Fig. 1). This pond was probably created to control the flow of the river and to provide an adequate and consistent stream of water to the mill downstream; it was probably too far from the mill to have been used as a direct power source.

According to information gleaned from historical maps, settlement in the project area did not occur until after 1938

(1938, 1956 Maps). Between 1938 and 1956, a house was constructed on the east side of Old Howarth Road, approximately 2,000 feet south of its intersection with Old Charlton Road (1956 Map). Several 19th-century farmsteads were located adjacent to the project area (Fig. 4), but these are not threatened by current development plans. No extant structures exist within the project area.

Approximately 600 feet north of the modern house adjacent to the project area is a low area that has served as a dumping site during the 20th century. The modern dump is located within the project area, and was probably used by residents in the vicinity of the project area. Several gravel pits flank or extend into the project area, although no gravel pits located within the project area are currently in operation.

The modern road system in the vicinity of the project area appears as early as 1831 (Fig. 3). Old Howarth Road flanks the project area on the east (Fig. 8). Old Charlton Road runs in an east-west direction and divides the project area approximately 1.2 miles north of the Hodges Village Dam. The Old Charlton Road Bridge, which once crossed the French River, no longer stands, and reflects the decay that has overtaken the old roadways in the area (Fig. 6).

The Boston and Albany Railroad once ran in a north-south direction through the western part of the project area. This railroad appears for the first time on the 1898 map and was still functioning in 1956 (1898, 1956 Maps). The railroad tracks were removed soon after 1956 and the railroad bed was converted into a service road for the high tension utility line that runs through the area today (Fig. 1).

Today the project area is used for recreational activities in addition to its primary function as a flood control area. Hunting, hiking, and snowmobiling take place within its boundaries. Two recreational areas, including playing fields and

tennis courts, are situated near the project area on land owned by the U.S. Army Corps of Engineers and leased to the town. Since the construction of the dam in 1959, water has been impounded in the project area on a seasonal basis. During the spring and in periods of heavy rainfall, the dam is used to control water flow below Hodges Village (Mr. John Wilson: personal communication).

FIELD INVESTIGATIONS

The archaeological investigation of the proposed Low Flow Augmentation Project was intended to satisfy the requirements of a Phase I, Step 2 (Intensive) cultural resources survey as outlined by the Massachusetts Historical Commission (MHC 1980: 9-10). The intensive archaeological survey is aimed at locating and identifying archaeological sites within the anticipated impact area of a project. The impact area of the present project involves approximately 200 acres of lowlands below the 476.0 elevation. Field investigations consisted of a pedestrian inspection of the project area and subsurface testing.

Field Reconnaissance

The purpose of the walkover survey was to visually assess the nature of the impact area and to identify archaeological sites by surface inspection. The field reconnaissance also served to evaluate the suitability of the project area for subsurface testing on the basis of actual field conditions, including such factors as drainage, slope, terrain, and disturbance.

The impact area was delineated with the assistance of a 1:2400 scale U.S. Army Corps of Engineers topographical plan.

The 476.0 elevation was marked onto this plan by extrapolation and by field survey data furnished by Dr. Gary Sanford, who conducted ecological research in the project area prior to the archaeological survey. The topographical plan with the impact area marked on it was then used as a field map for the surface reconnaissance and subsurface testing.

Although the total project area involves some 200 acres, the majority of this acreage consists of areas of standing water and swampland that was not testable due to poor drainage and mucky soils (Fig. 7). Characteristic vegetation in the project area includes Atlantic White Cedar, Red Maple, White Pine, Northern Red Oak, and Gray Birch, as well as low scrub vegetation. The wet soils in the impact area also support wetland plants such as ferns, mosses, and pitcher plants (Department of the Army 1980: 10).

The walkover survey demonstrated that portions of the impact area that were accessible for archaeological testing were consistently located near the 476.0 contour line. The archaeologically sensitive areas, in fact, consisted primarily of a narrow strip of relatively well drained land running around the perimeter of the reservoir area. Below this strip, the terrain was uniformly wet. Although the background research identified no prehistoric sites within the project area, well drained, relatively level portions of the impact area were considered archaeologically sensitive for the presence of prehistoric sites. This calculation of sensitivity was based on the supposition that dry areas on the margins of the French River and its associated wetlands would have been attractive locations for resource exploitation during the prehistoric period. Any archaeological sites located in these areas would probably be small, temporary or seasonal campsites. No significant historical period sites were anticipated along the low-lying areas of the project zone, although traces of historical material

derived from sites located at higher elevations outside the project area were expected.

Based on the results of the walkover reconnaissance, a total of 12 sections of the impact area were identified as moderately sensitive for prehistoric sites, and were scheduled for subsurface testing. These areas are shown in Figures 8-10. Sections 1, 2, 4, and 10 are small, natural peninsulas flanked by swampland or the French River. Sections 3, 8, 11, and 12 consist of land bordering between swamp and upland or river and upland. Sections 5,6, 7, and 9 are low, dry, inlet areas. All areas identified for testing are located along the edge of the area that will be impacted by the proposed project.

Subsurface Testing

The 12 areas identified during the field reconnaissance as archaeologically sensitive were tested by means of shovel test pits. A total of 124 test pits were excavated during the intensive survey. In general, test pits were excavated in transects running parallel to the long axis of the sensitive area. In order to test for the presence of small prehistoric sites, a sampling interval of 10 meters was employed in all areas except where otherwise indicated. The location of test pits is shown in Figures 8-10 .

The excavation units measured 50 x 50 cm. and were excavated to varying depths. Many of the units were located in areas that had been flooded and contained post-glacial silt and sand to a depth of c. 75 cm. In these areas, test pits were excavated to depths averaging over 100 cm. in order to test for cultural remains buried below the alluvial deposits. In several cases, high water table prevented further excavation. Other test units were located in higher areas that had not been subjected to recent flooding and silting; in such cases,

excavation proceeded until sterile glacial subsoils were reached. All test pits were excavated by shovel to a depth of at least 50 cm. Soil horizons were sifted as distinct units through ¼-inch mesh screen, and all cultural materials were collected and recorded by unit and stratigraphic provenience. Test pit data, including stratigraphy, soil color, texture, and composition, were recorded for each unit on standardized field forms.

A brief summary of the results of field testing is presented below. No prehistoric cultural materials were recovered in any of the test pits. A thin scatter of historical period artifacts was uncovered in several units.

Area 1 was located approximately 400 feet north of the Hodges Village Dam on the east side of the French River (Fig. 8). Test Pits 1-4 were placed along a north-south transect on a narrow section of land flanked by the swamp to the east and the river to the north and west. Red Maple and White Oak are the dominant forest species in this section. Testing produced no cultural materials.

Area 2, located directly east of Area 1, was another small peninsula jutting into the swamp (Fig. 8). The vegetation here consists of American Elm and low brush. Test Pits 5-8 were excavated in a transect that bisected this area. These pits encountered a scatter of 19th- and 20th-century artifacts, probably reflecting broadcast scatter associated with nearby Old Howarth Road.

Area 3 was located about 1600 feet north of the dam on the east side of the swamp. Test Pits 10-15 were excavated in two transects within an area that forms a transition between swampland and higher ground to the east. No cultural remains were recovered in these test pits (Fig. 8).

Area 4 is a hook-shaped projection of low wetland that included some testable areas on its northern edge. This section,

located some 600 feet north of Area 3, is bordered by swampland, the French River, and an upland area outside of the project area (Fig. 9). A transect including Test Pits 16-37 was excavated along a natural ridge adjacent to the French River. Alluvial silt and sand was encountered to levels below the present water table (c. 75 cm.) in most test units. All test pits in this section were devoid of cultural materials.

Area 5, located approximately 2,000 feet south of the intersection of Old Charlton Road and Old Howarth Road, comprises another transitional area between swampland and higher terrain (Fig. 9). Test Pits 38-41 were excavated in a transect placed east of Old Howarth Road. This transect was situated in the vicinity of a structure built by 1956 (1956 Map). An extant well was identified on the surface near Test Pit 17; no other above-ground remains of the recent structure were found in this area. No cultural materials were recovered from the test pits.

Area 6 was a V-shaped inlet on the east side of Old Howarth Road, about 1,600 feet from the intersection of that road with Old Charlton Road (Fig. 9). Test Pits 42-51 were excavated in an area of low brush and open field. A second transect, including Test Pits 52-57, was placed in a lightly wooded area that appeared to have served as a dump in this century. Several historical period ceramics were recovered in the test units; these probably are to be associated with the 20th-century dumping activities here.

Area 7 is located along a path that intersects with Old Charlton Road (Fig. 9). Test Pits 58-66 were excavated in this area. No cultural materials were encountered in these test units.

Area 8 comprised two natural ridges, one separating the French River from a swampy area, the other running perpendicular to the river (Fig. 10). The area is located at the junction of

Old Charlton Road and the east bank of the French River. The remains of a stone bridge are located at this point (Fig. 6). Two transects were placed in this section to test the two ridges. The first included Test Pits 67-75. Modern bottle glass was found in Test Pit 67 and an unidentified metal fragment and piece of brick were encountered in Test Pit 69. These artifacts probably represent a scatter of material derived from activity along Old Charlton Road. The second transect included Test Pits 76-81. Two sherds of whiteware, two bits of charcoal, and a brick fragment were recovered in Test Pit 81.

Area 9 is a small inlet area on the opposite side of the French River (Fig. 10). Test Pits 82-84 were excavated in this section. The test units were devoid of cultural materials.

Area 10 consists of two small north-south oriented peninsulas flanked by swampland (Fig. 9). Test Pits 85-89 were excavated along a transect on the easternmost of the two peninsulas. Test Pits 87 and 88 produced evidence of brick dumping. Test Pit 87 contained small pieces of brick, while whole bricks were found in Test Pit 88. The whole bricks were located randomly within the unit and no evidence of mortar was found. Many of the bricks appeared to be misformed wasters. No structures appear on any map in this vicinity, and it is likely that the area was used as a small dumping spot for the bricks.

Test Pits 90-99 were excavated on the westernmost peninsula in this section. No artifacts were found in any of these pits (Fig. 9).

Area 11 is located approximately 1,500 feet north of the Hodges Village Dam, in an area that forms a transition between swampland and upland terrain. Test Pits 100-109 were devoid of artifacts (Fig. 8).

Area 12 is located about 700 feet west of Area 11, and approximately 200 feet west of the old Boston and Albany Railroad bed (Fig. 8). This section is also transitional between swampland and upland areas. Test Pits 110-120 were located along a transect running parallel to the edge of the swampland. In Test Pit 119, a chunk of quartz was recovered along with 14 smaller quartz chunks. Although this material lacked well formed flakes, the density of quartz in this test pit suggested that the material might have been the result of cultural activity. The large chunk of quartz, in particular, suggested a possible prehistoric preform to the excavators in the field.

In order to further clarify the nature of this material, an additional four test units were excavated around Test Pit 119, at a distance of 5 meters from it (Fig. 8). No cultural materials were found in these test units (119a, b, c, d), or in any of the other test pits in this section.

Laboratory analysis of the quartz fragments recovered from Test Pit 119 indicated that the material was not culturally formed. The quartz is coarse, poor quality material that probably fractured naturally. The 14 small chunks reveal sharp, angular breaks suggestive more of natural fractures than human agency.

CONCLUSIONS AND RECOMMENDATIONS

The Phase I, Step 2 (Intensive) archaeological survey of the Hodges Village Low Flow Augmentation Project in Oxford, Massachusetts consisted of literature and document searches, field reconnaissance, and subsurface testing. Based on the background research and field reconnaissance, twelve sections of the impact area were identified as being moderately sensitive for the presence of prehistoric sites. These sections

consisted of relatively dry areas along the margins of the French River and its associated wetlands.

A total of 124 shovel test pits were excavated during the intensive survey. No prehistoric artifacts were found in any of the test units. A scatter of late historical artifacts was found in several test pits, reflecting a thin scatter of debris associated with minimal activities in the impact area during the Historical Period.

The lack of prehistoric material is not surprising given the narrow, low-lying nature of most of the areas tested during the archaeological survey. These areas, consisting for the most part of small, marginal areas running around the perimeter of the reservoir, frequently proved to be poorly drained transitional areas between swamp or river and more well drained areas beyond the project's impact area. In most cases, more attractive areas for prehistoric occupation or utilization could be found just beyond the project area, which essentially includes all the naturally low areas that would normally be susceptible to flooding at various times during the year. This is also confirmed by the pattern of land use in the area during the Historical Period. With few exceptions, historical roadways and residences were located outside the impact area of the present project.

In view of the results of the archaeological survey, it is concluded that no significant archaeological resources are likely to be impacted by implementation of the Low Flow Augmentation Project. It is therefore recommended that the project be permitted to proceed without further archaeological study.

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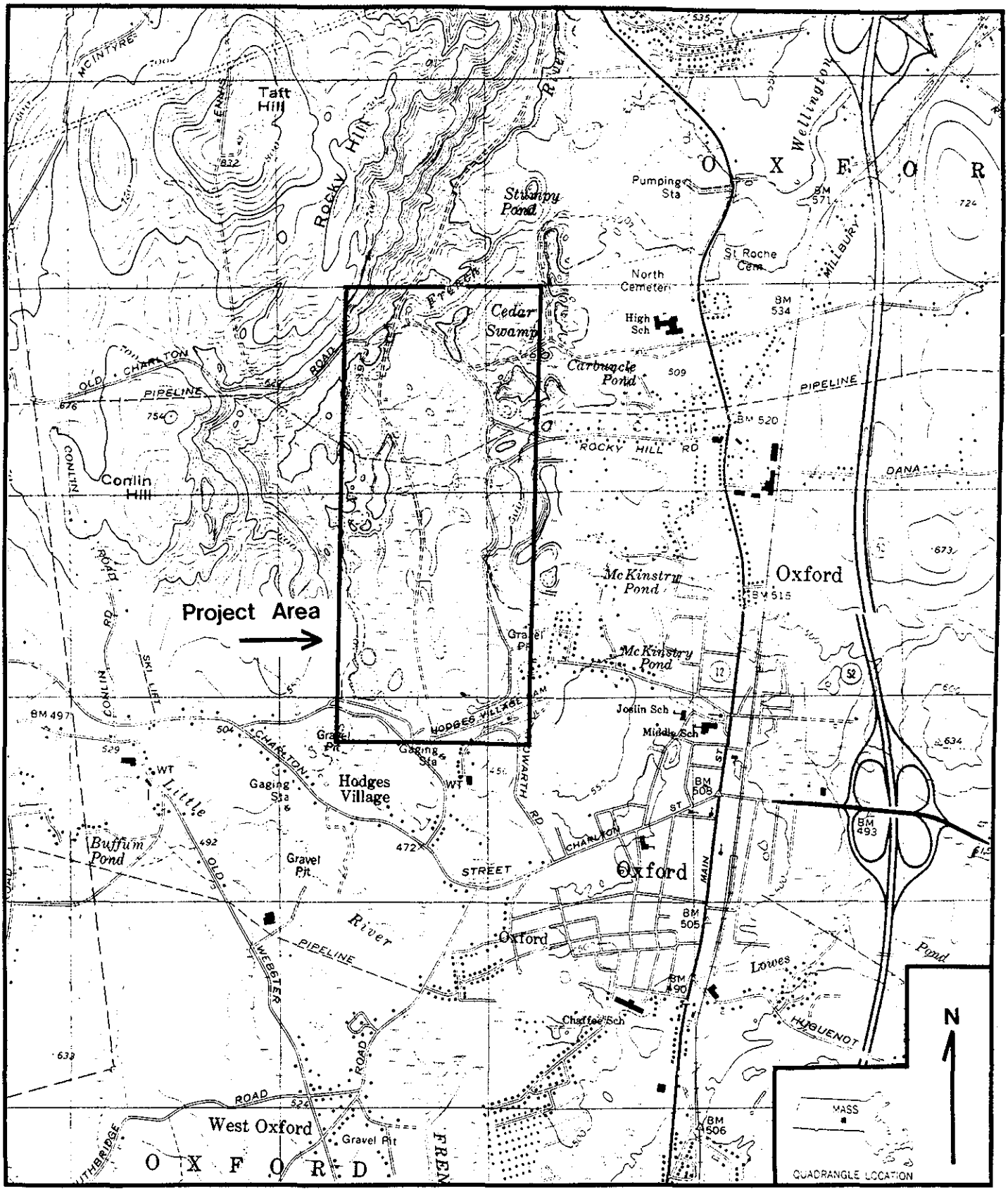

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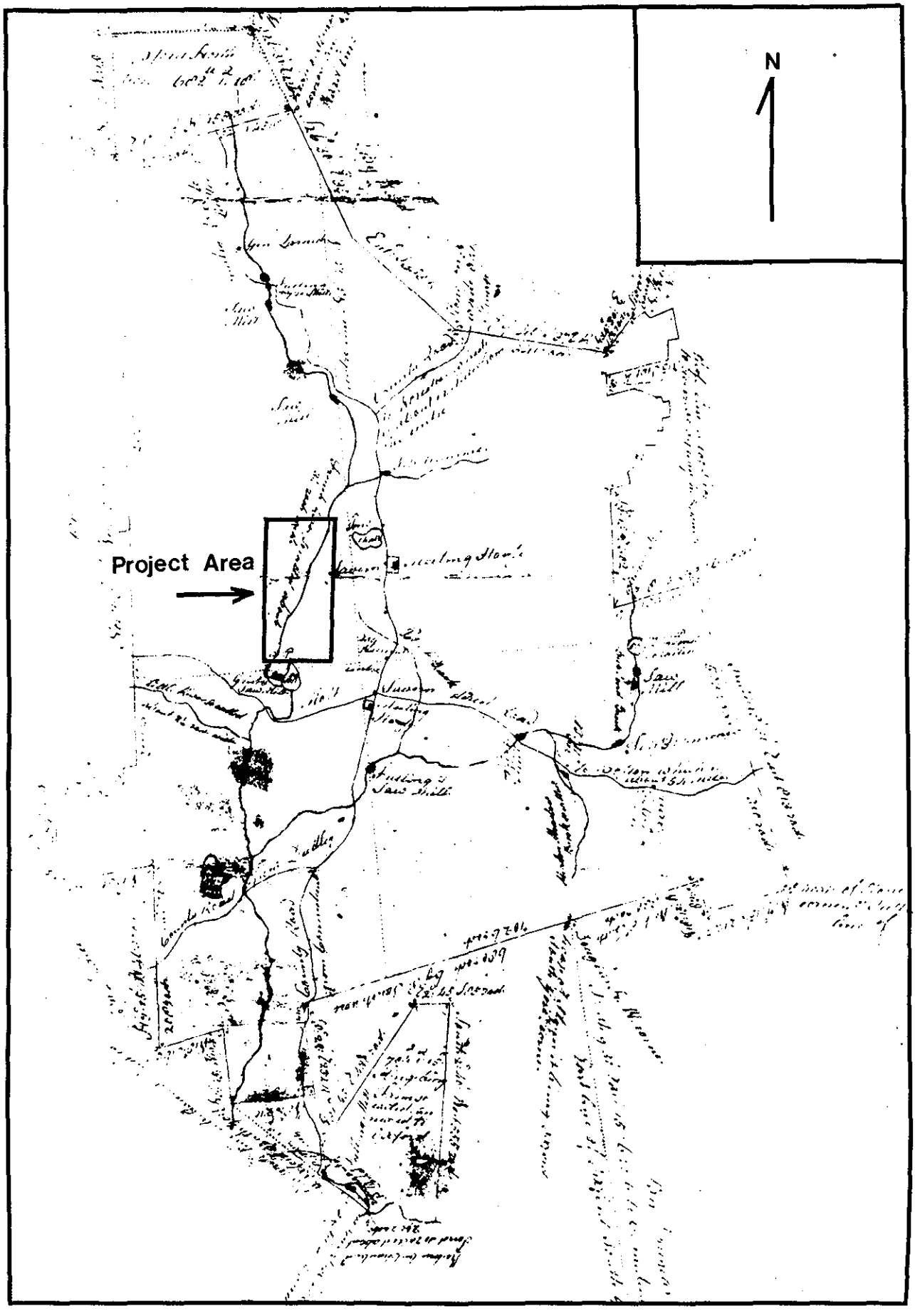
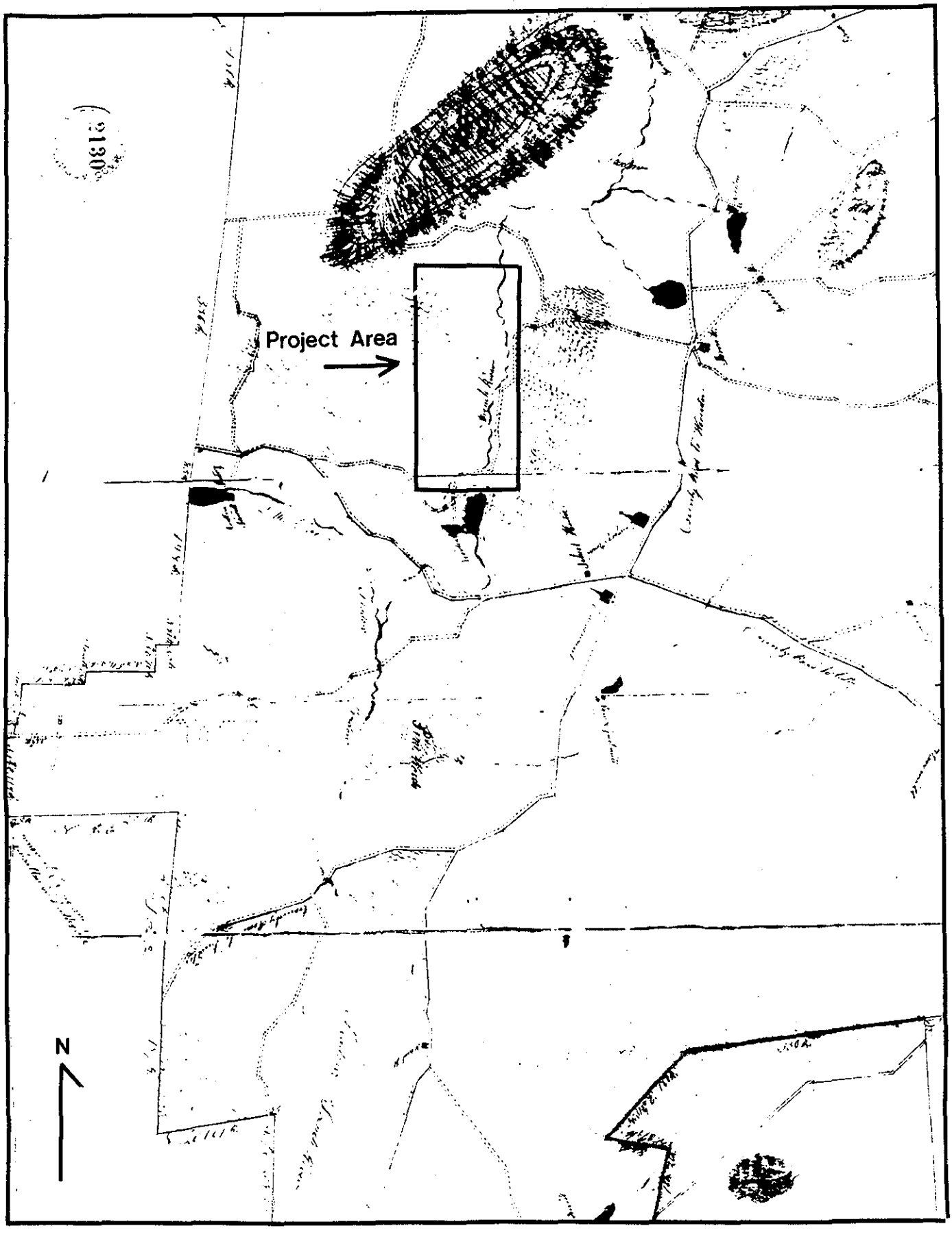
FIGURE 1



1795 MAP SCALE 1" = 4800' FIGURE 2



1831 MAP

SCALE 1" = 2500'

FIGURE 3

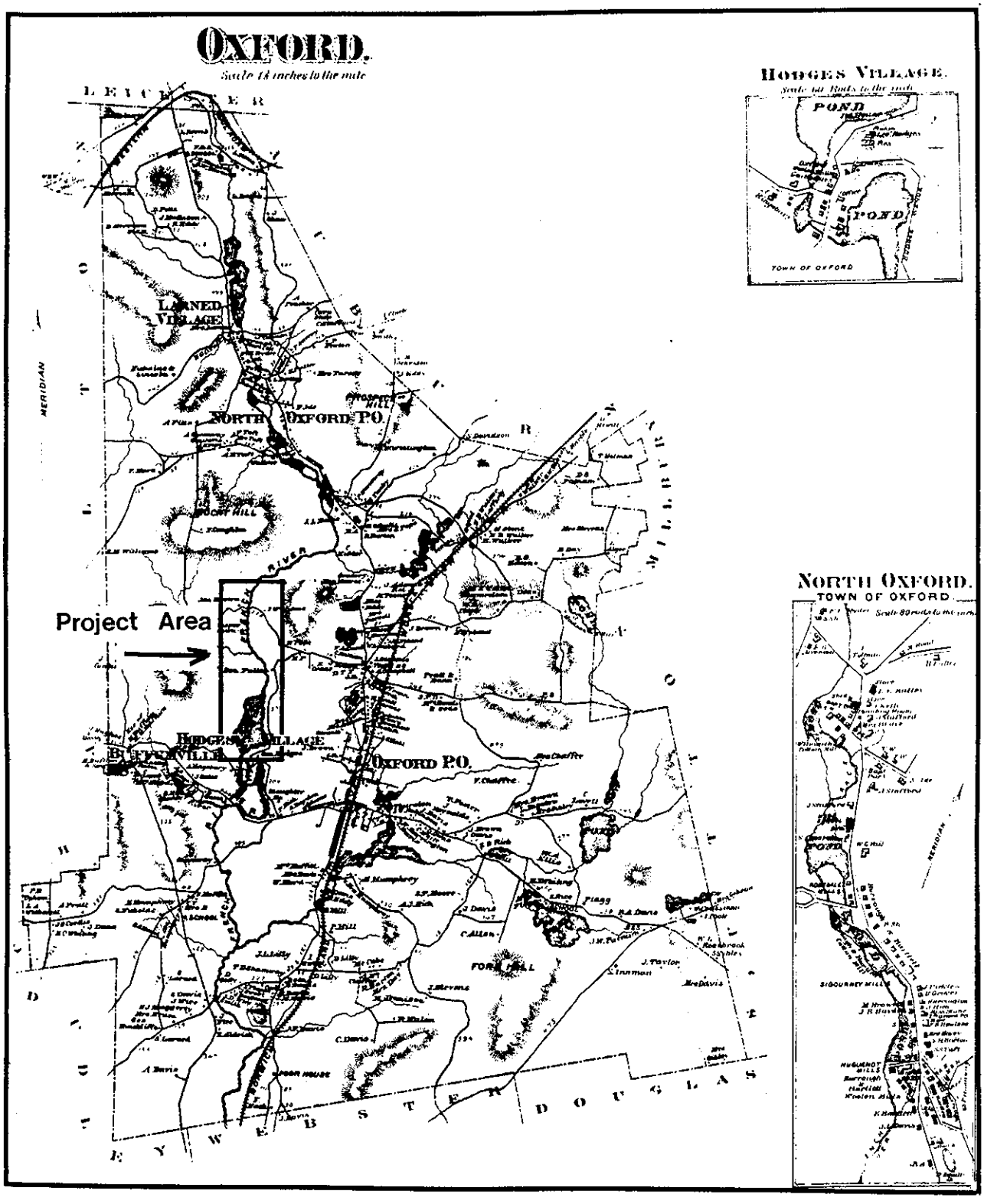


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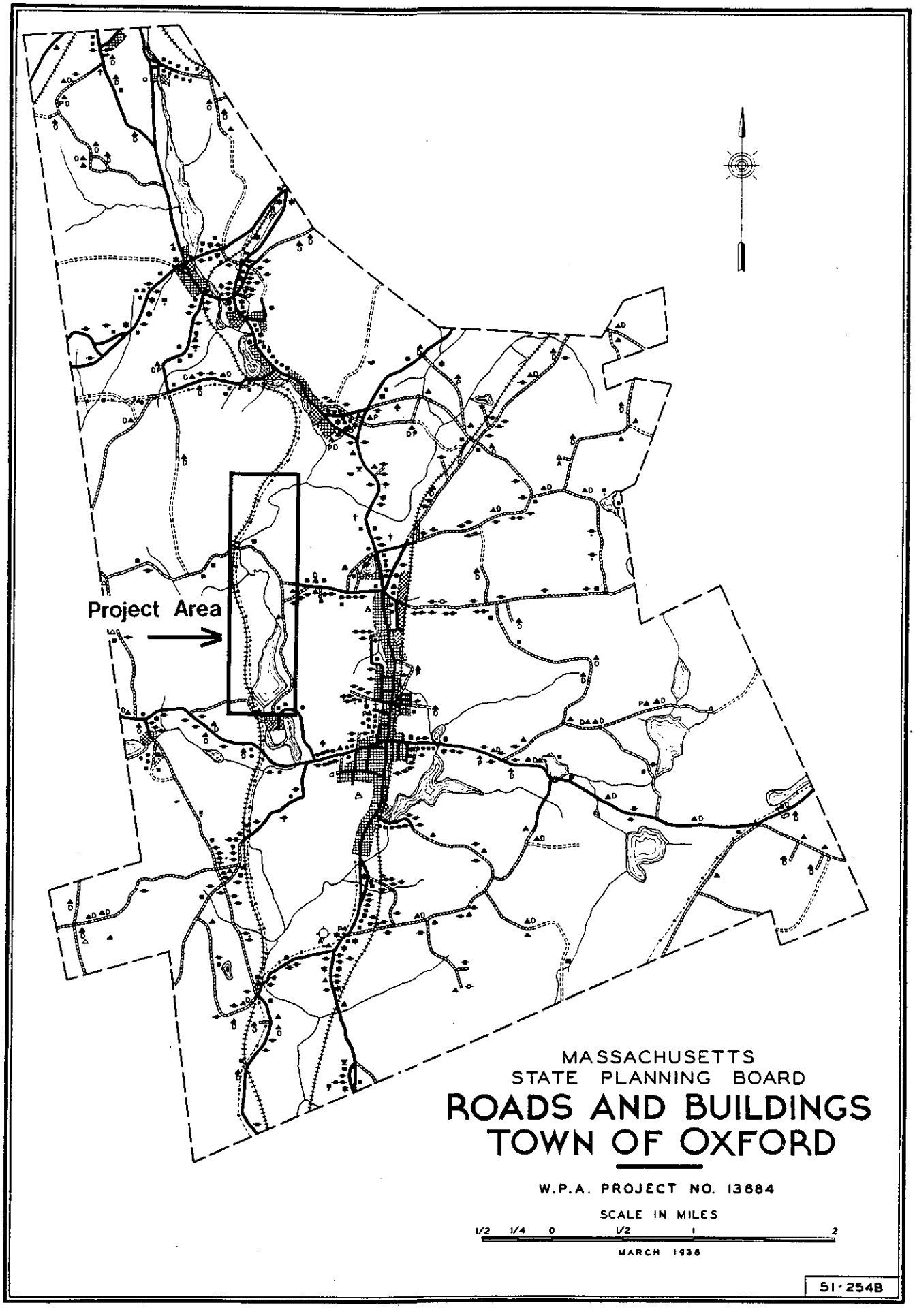
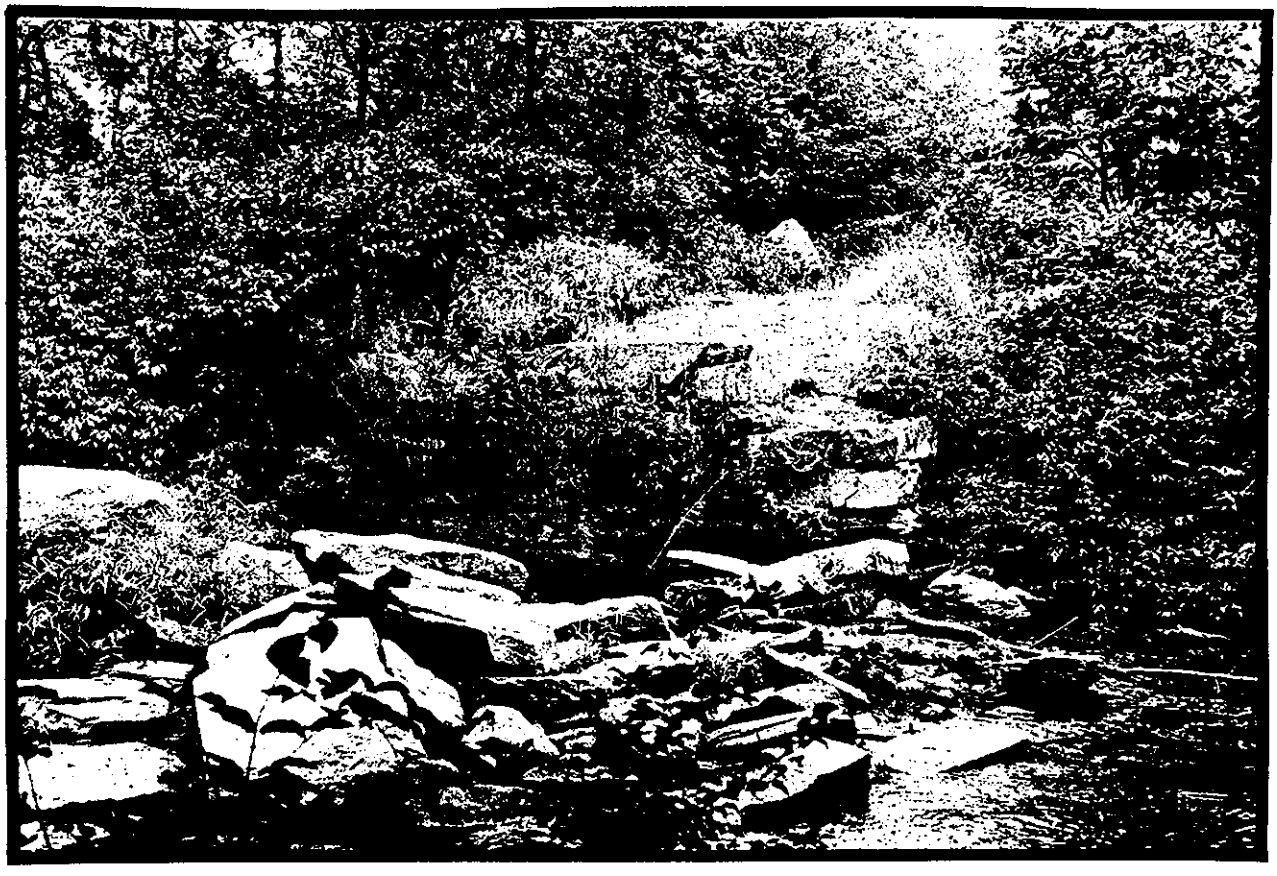
FIGURE 4



1938 MAP

FIGURE 5



View of Old Charlton Road Bridge, Looking West.

FIGURE 6

View of Typical Swampland Within Project Area
(Area 2, Looking East).

FIGURE 7

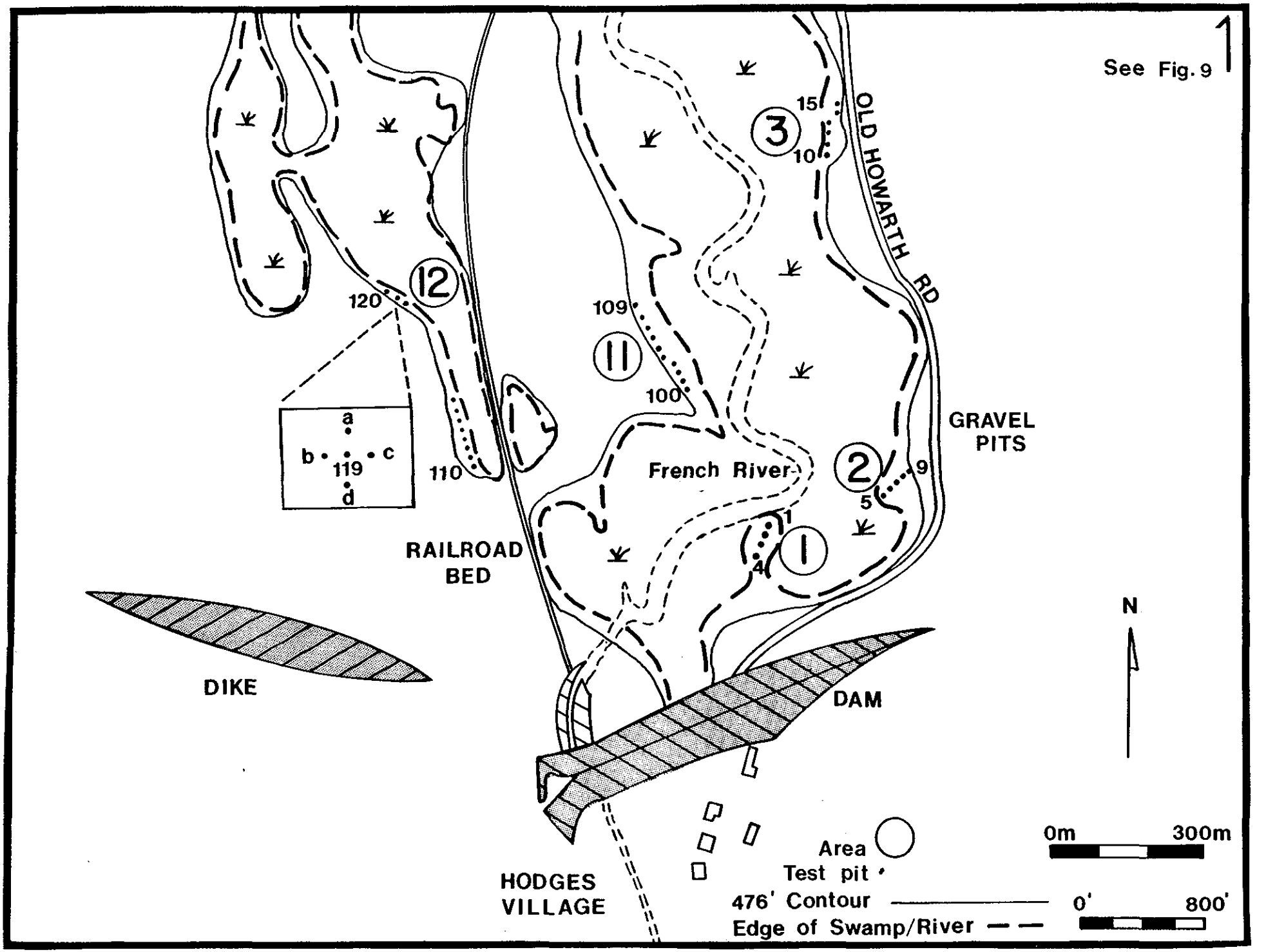

See Fig. 9
OLD HOWARTH RD
GRAVEL PITS
French River
RAILROAD BED
DIKE
DAM
HODGES VILLAGE
N
0m 300m
0' 800'
Area
Test pit
476' Contour
Edge of Swamp/River
1
2
3
11
12
15
10
9
5
1
4
109
100
120
110
119
a
b
c
d

FIGURE 8

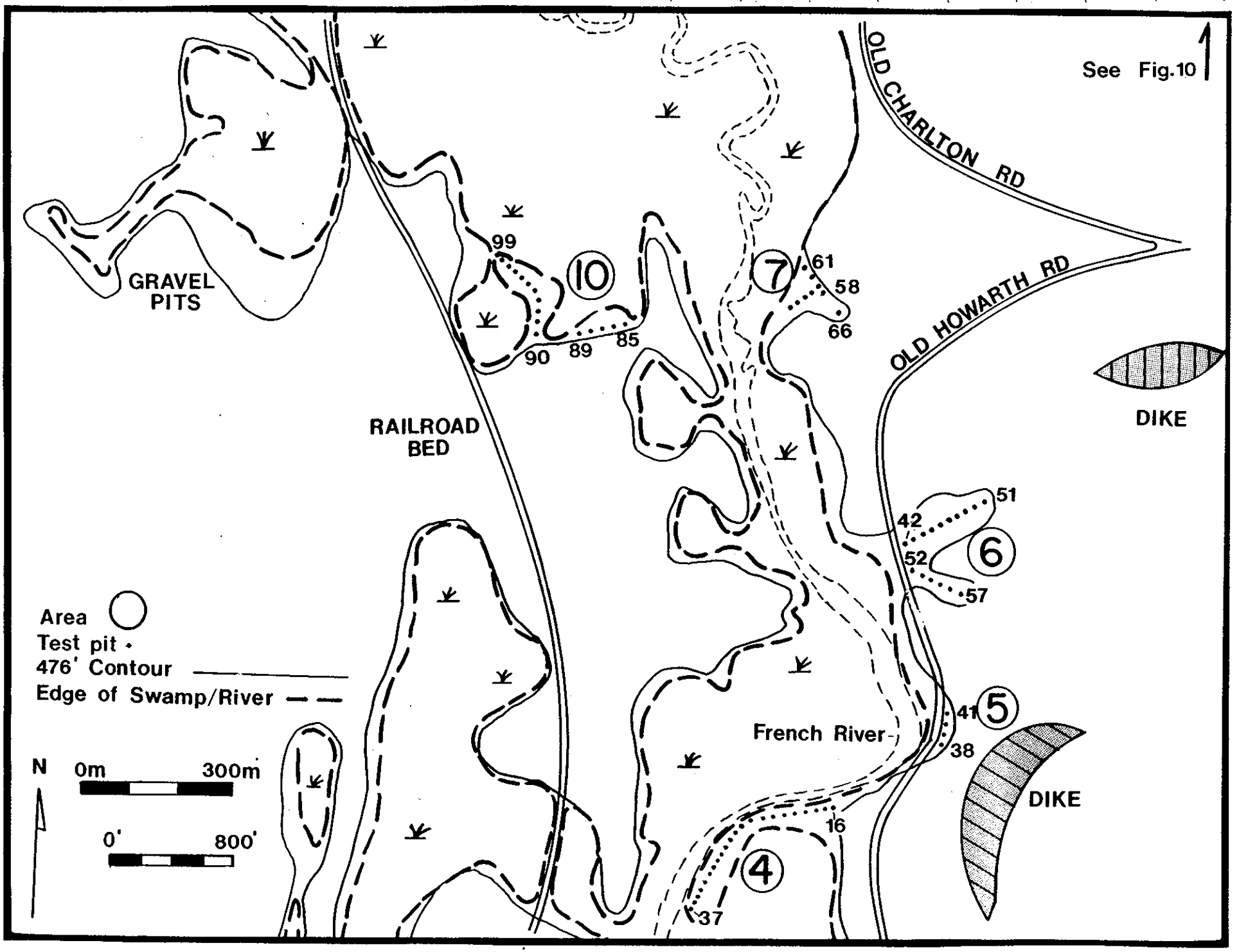

See Fig.10
OLD CHARLTON RD
OLD HOWARTH RD
GRAVEL PITS
RAILROAD BED
DIKE
DIKE
French River
10
7
6
5
4
99
90
89
85
61
58
66
51
42
52
57
41
38
16
37
Area
Test pit
476' Contour
Edge of Swamp/River
N
0m
300m
0'
800'

FIGURE 9

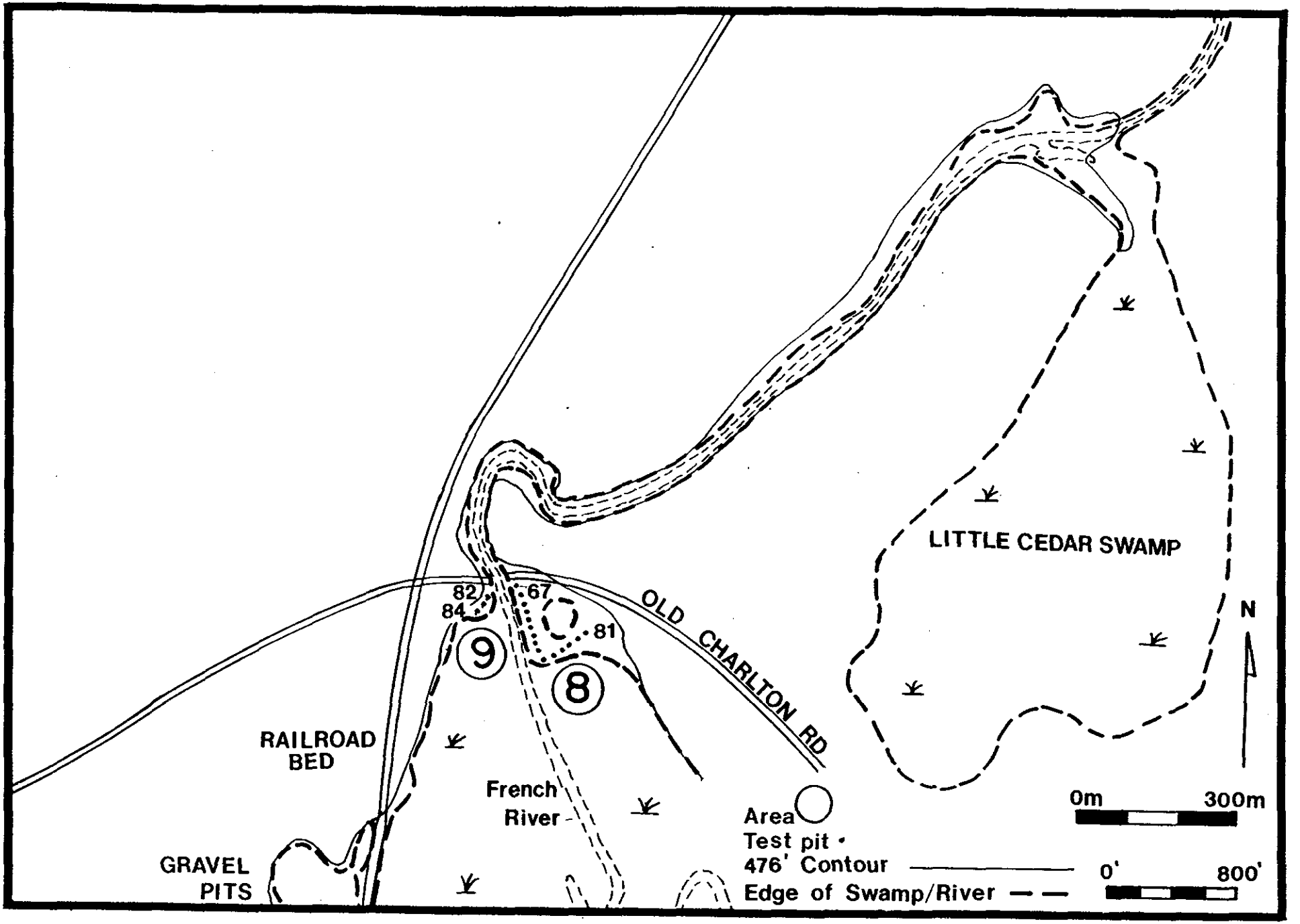

LITTLE CEDAR SWAMP
OLD CHARLTON RD
RAILROAD BED
French River
GRAVEL PITS
82
84
67
81
9
8
N
0m
300m
Area
Test pit
476' Contour
Edge of Swamp/River
0'
800'

FIGURE 10